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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/928,466	08/13/2001	Himadri Sen	U 013600-5	6448

7590 05/11/2004

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EXAMINER	
CHANNAVAJJALA, LAKSHMI SARADA	
ART UNIT	PAPER NUMBER
1615	

DATE MAILED: 05/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/928,466	SEN ET AL.	
	Examiner	Art Unit	
	Lakshmi S Channavajjala	1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-63* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-63* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Receipt of amendment dated 2-4-04 is acknowledged.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2-4-04 has been entered.

Amendment dated 2-4-04 listed claims 1-59 and claim 60 in part. In response to examiner's telephone message, attorney of record, Ms. Janet I. Cord, faxed a copy of the last page of claims listing claim 60 in part and claims 61-63.

Accordingly, claim 1-63 are presented.

Claim Rejections - 35 USC § 112

1. Claims 1-39, 42-45 and 48-63 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Instant claim 1 recites the new limitation "wherein under normal conditions of use more than 80% of the cefuroxime axetil is released in 4 hours and the outer coating does

not enhance the rate of drug relelase from the composition", which is a new matter. Instant specification describes compositions containing cefuroxime axetil in the inner core and probenecid in the immediate relelase, showing that 80% cefuroxime axetil (pages 20-26) is released in about 4 hours. However, the specification does not describe that such a release of cefuroxime axetil is "under normal conditions", nor there is any description of normal conditions. Besides, the specification also fails to describe the negative limitation that the outer coating does not enhance the rate of drug release from the composition. Applicants state that the support for the instant limitation comes from figure 1. However, Figure 1 only shows the release of cefuroxime but does not disclose the negative limitation as above. While it is true that applicants may show support to their claimed invention in words, figures, tables etc., instant limitation has not been described but has only been implied from the instant figure 1. Accordingly, it does not meet the requirement of describing the invention clearly and concisely such that it is conveyed to one of an ordinary skill in the art at the time of the invention that applicants had possession of the instant invention.

2. Claim 63 recites the limitation "claim 4" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

Claims 1, 3-22 and 24-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,897,270 to Deutsch et al ('270) in view of US 6,372,255 to Saslawski et al ('255) OR '270 in view of US 5,578,316 to Bharadwaj et al ('255).

'270 teach a pharmaceutical tablet comprising a core containing cefuroxime axetil and a film coat, which serves to mask the bitter taste of cefuroxime axetil upon oral administration and also allows immediate disintegration of the core following rupture of film coat.'270 teach that a slow permeation of moisture from the film to the core of the tablet results in gelling of cefuroxime present in the core and thus leads to poor disintegration of the tablet core followed by poor dissolution of the drug. In order to overcome the gelling problems and achieve high bioavailability of cefuroxime axetil (col. 1), '270 suggests a film coating over a drug core, wherein the coat ruptures rapidly and releases the drug (col. 2). Among the suitable film-forming agents, '270 teach Eudragit (E and E30) polymers (col. 3, lines 35). '270 teach incorporating disintegrants and other excipients in the core (col. 4) and plasticizers and other excipients in the coating (col. 3) and hence meet the limitations of claims 24-39. The method of preparing the film-coated tablets is discussed in col. 4. With respect to the claimed amounts and percentages, examples 1-4 of '270 teach high and low dosages of cefuroxime axetil. For claim 6, see col. 4, lines 66-67.

'270 teach film-coating polymers including Eudragit, but fail to specify the polymers that are recited in claim 1.

'255 teach a multi-layer tablet for instant and prolonged release of active substances comprising an outer layer formed of an active agent and an excipient and an inner layer comprising as polymeric matrix in which an active substance is dispersed, allowing the prolonged release of the active substance. '255 teach the multi-layer tablet for several kinds of drugs, including cefuroxime axetil (col. 3, lines 35-38). The inner polymer of '255 comprises copolymers derived from methacrylic acid and their derivatives, in particular ethylammonium

methacrylate and methacrylate polymers and the polymers such as Eudragit RL 30 or RS 30, which are also claimed in the instant invention (col. 7 and col. 10, lines 40-57). The tablets of '255 includes excipients such as lubricants, disintegrants etc (col. 5-6). '255 also teach incorporating a gastro resistant or enter soluble polymeric film made of cellulose or copolymers of methacrylic acid such that the active agent is released only in the duodenal tract.

'316 teach palatable pharmaceutical compositions that are granular in nature and a method of masking the taste of unpleasant tasting drugs, comprising the step of coating the drug cores with separate layers of aqueous dispersions of methacrylate ester copolymers, preferably, poly(methacrylate, methyl methacrylate) to which quaternary ammonium groups have been introduced to modify the permeability of the ester (col. 1, line 13-19; col. 2, lines 15-20, lines 43-65). '316 teach antibiotics among the unpleasant tasting drugs (col. 2) and in particular suggest polymers RS30 and RL30, also described in the instant application, both for masking bitter taste and also providing an immediate release besides their conventional application in sustained release and an enteric coated effect (lines bridging col. 5 and 6). '316 also teach

Accordingly, it would have been obvious for one of an ordinary skill in the art at the time of the instant invention to use the polymers, Eudragit RS30 or RL30 of '255 or '316 in the inner layer of '270, surrounding the drug core because'270 desires a taste masking and an immediate release cefuroxime axetil preparation and '255 teach the Eudragit RS30 or RL30 polymers for prolonged release of the inner drug and '316 teach Eudragit RS30 or RL30 as efficient taste masking and also for both immediate release and sustained release. Accordingly, one of an ordinary skill in the art would have expected to provide both masking the bitter taste of cefuroxime axetil and also provide an immediate release of the drug. With respect t the

percentages and ratios of the polymers claimed, the role of the claimed polymers in producing the desired release pattern has been well established as evidenced by the above teachings and accordingly, optimizing the ratios or percentages with an expectation to provide the desired release would have been within the scope of a skilled artisan.

Claims 2 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,897,270 to Deutsch et al ('270) in view of US 6,372,255 to Saslawski et al ('255) OR '270 in view of US 5,578,316 to Bharadwaj et al ('255) as applied to claims 1, 3-22 and 24-63 above, and further in view of US 4,325,960 to Godtfredsen et al ('960).

'270 fail to teach probenecid in cefuroxime axetil containing compositions.

'960 teach compounds useful in the treatment of bacterial infections, in particular, pencillanic acid derivatives. These derivatives are powerful against a wide range of beta-lactamases and act in synergy with cephalosporin and penicillin (col. 1- 3). '960 teach combining beta-lactamase inhibitors with probenecid because the latter blocks tubular excretion of beta-lactam antibiotics. Applicants admit that antibiotics are actively eliminated via renal tubular secretion. Therefore, it would have been obvious for one of an ordinary skill in the art at the time of the instant invention to add probenecid (as taught by '960), in effective amounts, to cefuroxime axetil composition of '270, containing acrylic polymers having quaternary ammonium groups of '255 or '316, with an expectation to inhibit the tubular excretion of cefuroxime and thus prolong the drug levels in the body and thus its bioavailability.

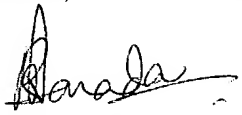
Response to Arguments

Applicant's arguments with respect to claims 1-63 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lakshmi S Channavajjala whose telephone number is 571-272-0591. The examiner can normally be reached on 7.30 AM -4.00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K Page can be reached on 571-272-0602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Lakshmi S Channavajjala
Examiner
Art Unit 1615
May 3, 2004